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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/806,604	08/03/2001	Kamron M. Wright	03-L0-6740	3022

7590 10/03/2003
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EXAMINER

ELKASSABGL H:HA

ART UNIT PAPER NUMBER

2834

DATE MAILED: 10/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/806,604

Applicant(s)

WRIGHT ET AL.

Examiner

Heba Elkassabgi

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08/20/2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☒ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08/30/2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Drawings

New corrected drawings are required in this application because the illustration of Figure #1 does not meet the requirements of proper PTO illustration. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. No new matter should be entered.

The drawings are objected to under 37 CFR 1.83(a) because they fail to clearly illustrate the claimed subject matter in Figure #1, as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention must be clearly shown in the drawing. MPEP § 608.02(d). No new matter should be entered.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "154" has been used to designate both inner surface and raised portion of an end shield. The illustration of Figure #3 is not clear in detail as to which reference is the reference number referring to.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

INFORMATION ON HOW TO EFFECT DRAWING CHANGES

Replacement Drawing Sheets

Drawing changes must be made by presenting replacement figures which incorporate the desired changes and which comply with 37 CFR 1.84. An explanation of the changes made must be presented either in the drawing amendments, or remarks, section of the amendment. Any replacement drawing sheet must be identified in the top margin as "Replacement Sheet" and include all of the figures appearing on the immediate prior version of the sheet, even though only one figure may be amended. The figure or figure number of the amended drawing(s) must not be labeled as "amended." If the changes to the drawing figures are not accepted by the examiner, applicant will be notified of any required corrective action in the next Office action. No further drawing submission will be required, unless applicant is notified.

Identifying indicia, if provided, should include the title of the invention, inventor's name, and application number, or docket number (if any) if an application number has not been assigned to the application. If this information is provided, it must be placed on the front of each sheet and centered within the top margin.

Annotated Drawing Sheets

A marked-up copy of any amended drawing figure, including annotations indicating the changes made, may be submitted or required by the examiner. The annotated drawing sheets must be clearly labeled as "Annotated Marked-up Drawings" and accompany the replacement sheets.

Timing of Corrections

Applicant is required to submit acceptable corrected drawings within the time period set in the Office action. See 37 CFR 1.85(a). Failure to take corrective action within the set period will result in ABANDONMENT of the application.

If corrected drawings are required in a Notice of Allowability (PTOL-37), the new drawings **MUST** be filed within the THREE MONTH shortened statutory period set for reply in the "Notice of Allowability." Extensions of time may NOT be obtained under the provisions of 37 CFR 1.136 for filing the corrected drawings after the mailing of a Notice of Allowability.

Specification

The disclosure is objected to because of the following informalities: Page 4 of the specification Full paragraph 1, line 3, the control assembly is referred to as 104 and the end shield is referred to as 102, where as the applicant amended the control assembly to be labeled as 102. Appropriate correction is required. No new matter should be entered.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1,2,3,10,12,16,17, and 21are rejected under 35 U.S.C. 102(b) as being anticipated by Permuy (U.S. Patent6031306).

Permuy discloses in Figures 1 a motor end shield assembly having a shaft opening (38) configured to receive a motor shaft (10) and an end shield made of aluminum (circular frame 24), that is configured as a heat sink, having an outer surface and an inner surface, in which the outer surface including a plurality of fins (32) raising from substantially flat raised portion and a control assembly (panel 29) in contact with the inner surface, and a power assembly (40 and 42) are connected to the control assembly (panel 29). The end shield (circular frame 24) has a plurality of openings (A) that extend through the endshield to for attaching to the motorized fan. The inner

surface has a substantially flat raised area (B) for contacting the control assembly (panel 29). The control assembly (panel 29) comprises of a control board (circuit board 16) and a plurality of power transistors (36) connected to the control board (circuit board 16).

In regards to claim 21 the method of assembling is inherent to the structure of the motor as claimed above.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 11/1 and 18/1 are rejected under 35 U.S.C. 103(a) as being unpatentable over Permuy (U.S. Patent 6031306) and further in view of Search (U.S. patent 972929).

Permuy substantially disclose the claimed invention. However, Permuy does not show a cap plug (man hole 34) opening that extends through an endshiled (12) in which the cap plug (34) is closed by a cap plug covering (lid 35), in order to repairs may be easily attend to.

It would have been obvious to one of ordinary skill in the art to combine the reference of Permuy structure of the motor endshiled with the structure of Search in order to have an easier access to the internal compartments of the motor.

Claims 13, 14, 24, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Permuy (U.S. Patent 6031306) and further in view of Takagi et al. (U.S. patent 6081056).

Permuy substantially discloses the claimed invention. However, Permuy does not show a power assembly comprises a power board and an insulator positioned between the power board and the control board. Takagi et al. Discloses a power board (22) having an insulator positioned between the power board and the control board (21), with clamp bars (43) that are between the power assembly board (22) and the control board (21) and the clamp bars (43) extend through to the insulate between the power board and the control board, in order to stabilize the circuit board.

It would have been obvious to one of ordinary skill in the art to combine the reference of Permuy structure of the motor endshiled with the structure of Takagi et al. h in order to have stabilized the circuit board.

Claims 4, 5, 6, 7, 8, 9, 15, 19, 20, 22, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Permuy (U.S. Patent 6031306) and further in view of Liberati (U.S. Patent 5383092).

Permuy discloses in Figures 1 a motor end shield assembly having an end shield (circular frame 24) having an outer surface and an inner surface, in which the outer surface including a plurality of fins (32) and a control assembly (panel 29) in contact with the inner surface, and a power assembly (40 and 42) are connected to the control

assembly (panel 29). The end shield (circular frame 24) has a plurality of openings (A) that extend through the endshield to for attaching to the motorized fan. The inner surface has a substantially flat raised area (B) for contacting the control assembly (panel 29). The control assembly (panel 29) comprises of a control board (circuit board 16) and a plurality of power transistors (36) connected to the control board (circuit board 16). However, Permuy does not disclose that the end shield is a heat sink.

Liberati discloses in Figure 2 and 3 having an endshield which comprises as a heat sink (134), in which a control assembly (26 and 49) further comprises a thermal pad (160) between the power transistors (46) and the end shield (34) in order to ensure good heat transfer from the transistors to the heat sink, in which a plurality of bolt openings extend through the endshield. The power transistors (46) having a plurality of contacting stripes (leads 49) which extending substantially parallel to the circuit board (26). Furthermore the transistors have a top surface, bottom surface, a back, and a tab (56) which extends along from the back to the top surface of the transistor (46) and that the tab (56) contacts the circuit board (26). The power transistor (46) includes a front in which the leads (49) extend from a front of the power transistors (46) at a position closer to a bottom surface than to a top surface. Further more, the tabs (56) contact a thermal pad (160), which provides a good heat conductivity with the end shield (34).

In regards to claim 22-23 the method of assembling is inherent to the structure of the motor as claimed above.

It would have been obvious to one of ordinary skill in the art to combine the structure of Permy of the motor with the structure of Liberati of the motor having a thermal pad in order to provide good heat conductivity through the end shield.

Allowable Subject Matter

Prior art does not disclose Claim 13 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Prior art does not disclose

Claim 14, 24, and 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. In regards to claim 14 the prior art does not disclose a clamp bars extending through an insulator between the power assembly and the control assembly. In regards to claims 24 and 25 the prior art does not disclose a plurality of clamp bars with an insulator.

Response to Arguments

Applicant's arguments with respect to claims 1-25 have been considered but are moot in view of the new grounds of rejection.

Conclusion

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Heba Elkassabgi whose telephone number is (703) 305-2723. The examiner can normally be reached on M-Th (6:30-3:30), and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308-1371. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

HYE

Nestor M. Ramirez

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